RINGKASAN

Kedelai merupakan salah satu produk pangan strategis bagi bangsa Indonesia dan merupakan sumber protein utama masyarakat. Kebutuhan kedelai yang tinggi setiap tahunnya, belum dapat dipenuhi dari produksi dalam negeri sehingga harus dipenuhi dari impor. Peningkatan produksi kedelai dapat dilakukan melalui perluasan areal tanam yaitu dengan memanfaatkan lahan marginal salah satunya lahan pasir pantai. Produktivitas lahan pasir yang rendah perlu diperbaiki melalui penambahan bahan organik yaitu dengan pemberian bokashi limbah tongkol jagung. Penelitian bertujuan untuk: 1) mengetahui ragam pertumbuhan dan hasil dari tiga varietas kedelai yang ditanam di tanah pasir pantai; 2) mengetahui pengaruh dosis bokashi dari limbah tongkol jagung terhadap pertumbuhan dan hasil kedelai di tanah pasir pantai; 3) menentukan dosis pupuk bokashi yang sesuai dalam meningkatkan pertumbuhan dan hasil kedelai di tanah pasir pantai.

Penelitian dilaksanakan pada bulan Mei 2020 sampai dengan Agustus 2020 di *plastic house* yang berlokasi di Desa Karanggintung, Kecamatan Sumbang, Kabupaten Banyumas dan Laboratorium Agronomi dan Hortikultura, Fakultas Pertanian, Universitas Jenderal Soedirman. Penelitian menggunakan Rancangan Acak Kelompok Lengkap (RAKL) faktorial (3x4), terdiri dari 2 faktor perlakuan yaitu varietas kedelai yang terdiri dari Detap 1 (V_1), Devon 1 (V_2), dan Grobogan (V_3) dan dosis bokashi dari limbah tongkol jagung meliputi: tanpa bokashi (kontrol), dosis bokashi 80 g/polibag (10 ton/ha), dosis bokashi 160 g/polibag (20 ton/ha), dan dosis bokashi 240 g/polibag (30 ton/ha). Variabel yang diamati meliputi tinggi tanaman, jumlah daun, jumlah cabang, umur berbunga, umur panen, jumlah polong per tanaman, persentase polong isi, bobot biji per tanaman, bobot 100 biji, bobot tanaman kering, dan bobot akar kering. Data penelitian di analisis dengan uji F (ANOVA) pada taraf kesalahan 5% apabila hasil menunjukan adanya pengaruh nyata, maka dilanjutkan dengan *Duncant's multiple range test* (DMRT) untuk membandingkan pengaruh antar perlakuan.

Hasil penelitian menunjukkan bahwa varietas Devon 1 tanamannya paling tinggi dengan jumlah daun dan jumlah cabang terbanyak. Varietas Grobogan meskipun tanamannya paling pendek dengan, jumlah daun paling sedikit, serta paling cepat dipanen, tetapi hasil biji tinggi dan ukuran bijinya paling besar. Dosis bokashi dari limbah tongkol jagung 80 g/polibag paling efektif dalam meningkatkan pertumbuhan tinggi tanaman, jumlah daun, bobot biji per tanaman, dan bobot tanaman kering. Pemberian bokashi dari limbah tongkol jagung hingga dosis 160 g/polibag akan menambah umur panen, tetapi pertumbuhan dan hasil bijinya justru menurun. Interaksi antara tiga varietas kedelai dengan pemberian dosis bokashi limbah tongkol jagung efektif terhadap bobot 100 biji yaitu pada varietas Grobogan dengan dosis 80 g/polibag memiliki bobot 100 biji yang paling tinggi.

SUMMARY

Soybean is one of the strategic food products for the Indonesian people and is the main source of protein for the community. The high demand for soybeans each year cannot be fulfilled from domestic production so it must be met from imports. Increasing soybean production can be done through expanding the planting area, namely by utilizing marginal land, one of which is coastal sand. The low productivity of sandy land needs to be improved through the addition of organic matter, namely by giving bokashi corn cobs waste. The aims of the research were: 1) to determine the growth and yield of three varieties of soybean grown in sand beach soil; 2) to determine the effect of the dose of bokashi from corn cobs waste on the growth and yield of soybeans in sand beach soils; 3) determine the dosage of bokashi fertilizer that is suitable for increasing the growth and yield of soybeans in sand beach soils.

The research was carried out from May 2020 to August 2020 in a plastic house located in Karanggintung Village, Sumbang District, Banyumas Regency and the Agronomy and Horticulture Laboratory, Faculty of Agriculture, Jenderal Soedirman University. The study used a factorial Complete Randomized Block Design (3x4), consisting of 2 treatment factors, namely soybean varieties consisting of Detap 1 (V1), Devon 1 (V2), and Grobogan (V3) and the dose of bokashi from corn cobs waste includes : without bokashi (control), bokashi dose 80 g / polybag (10 ton / ha), bokashi dose 160 g / polybag (20 ton / ha), and bokashi dose 240 g / polybag (30 ton / ha). The variables observed included plant height, number of leaves, number of branches, flowering age, harvest age, number of pods per plant, percentage of filled pods, seed weight per plant, 100 seeds weight, dry plant weight, and dry root weight. The research data were analyzed with the F test (ANOVA) at an error level of 5% if the results showed a significant effect, then continued with Duncant's multiple range test (DMRT) to compare the effects between treatments.

The results showed that the Devon 1 plant variety had the highest number of leaves and the highest number of branches. Although the Grobogan variety has the shortest plants with the least number of leaves and is the fastest to harvest, the seed yield is high and the seed size is the largest. The dose of bokashi from corn cobs waste of 80 g / polybags was the most effective in increasing plant height growth, number of leaves, seed weight per plant, and dry plant weight. Giving bokashi from corn cobs waste up to a dosage of 160 g / polybag will increase the age of the harvest, but the growth and grain yield actually decreases. The interaction between the three soybean varieties with the dose of corncob bokashi waste was effective against the weight of 100 seeds, namely the Grobogan variety with a dose of 80 g / polybag having the highest weight of 100 seeds.